

# Contaminants found in senior center soil include carcinogens

Continued from Page A-1

The remediation is being done by the town and Fuss & O'Neill as the contractor for the new senior center, she said.

"We have received documentation of what they've been taking to Central," Masttrati said.

"The rest, as far as the complaint about how they were handling materials, is still under investigation. We did receive a complaint and we did follow up with an inspection and we're still reviewing information from that investigation," she said.

The contaminants that testing at the senior center site showed exceeded residential exposure criteria, according to Stephanie Powell, spokesperson for the DEM, were polycyclic aromatic hydrocarbons (PAHs), beryllium, lead and total petroleum hydrocarbons (TPHs). Of the polycyclic aromatic hydrocarbons, two — benzo[a]pyrene and dibenzo[a,h]anthracene — also exceed the industrial/commercial exposure criteria, she said.

"Most of these things I'm told are often found in urban soils," Powell said.

According to information on the Web site for the Agency for Toxic Substances and Disease Registry (ATSDR), an agency of the U.S. Department of Health and Human Services, PAHs are a group of chemicals formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. They are found throughout the environment in the air, water, and soil, according to the Web site at [atsdr.cdc.gov](http://atsdr.cdc.gov).

PAHs can enter the body through the lungs when breathing air that contains them (usually stuck to particles or dust), and drinking water and swallowing food, soil, or dust particles that contain PAHs, the Web site states. PAHs could enter the body if the skin comes into contact with soil that contains high levels of PAHs. Results from animal studies show PAHs do not tend to be stored in the body for a long time, according to the Web site.

The Department of Health and Human Services (DHHS) has determined that benzo[a]pyrene and dibenz[a,h]anthracene are known animal carcinogens, the Web site states. The International Agency for Research on Cancer (IARC) has determined benzo[a]pyrene is probably carcinogenic to humans and the EPA has determined dibenz[a,h]anthracene is a probable human carcinogen, according to the Web site.

Lead, according to the ATSDR Web site, occurs naturally in the environment but most of the high levels found come from

human activities. Once lead falls onto soil, it sticks strongly to soil particles and remains in the upper layer of soil, the Web site states.

Lead can enter the body mostly through breathing and swallowing, according to the Web site. The body does not change lead into any other form, the Web site indicates. Once it is taken in and distributed to the organs, the lead not stored in bones leaves the body. About 99 percent of the amount of lead taken into the body of an adult will leave in the waste within a couple of weeks, the Web site states, but only about 32 percent of the lead taken into the body of a child will leave in the waste. Under conditions of continued exposure, not all of the lead that enters the body will be eliminated, and this may result in accumulation of lead in body tissues, especially bone, according to the Web site. At high levels of exposure, lead can severely damage the brain and kidneys in adults or children and ultimately cause death. Children are more sensitive to the health effects of lead than adults. No safe blood lead level in children has been determined.

Beryllium is an element that occurs naturally, according to the ATSDR Web site. It is present in a variety of materials, such as rocks, coal and oil, soil, and volcanic dust. Beryllium is a metal that can be harmful when breathed in, the Web site states. The effects depend on amount and length of exposure.

Total Petroleum Hydrocarbons (TPH), according to the ATSDR Web site, is a term used to describe a broad group of several hundred chemical compounds that originally come from crude oil. TPH can enter and leave the body when breathing them in air, swallowing them in water, food or soil, or touching them, the Web site states. Most components of TPH will enter the bloodstream rapidly when breathing them as a vapor or mist or when swallowing them, the Web site states. When TPH compounds are touched, the Web site states, they are absorbed more slowly and to a lesser extent than when breathed or swallowed. Most TPH compounds leave the body through urine or when exhaling air containing the compounds, the Web site states. Very little is known about the toxicity of many TPH compounds, according to the Web site.

For all the identified contaminants, the Agency for Toxic Substances and Disease Registry Web site indicates that effects are dependent on the amount and length of exposure to the substance in question. More information can be found on the Web site at [atsdr.cdc.gov](http://atsdr.cdc.gov).

# Fire district merger successful

Continued from Page A-1

However, the fact that everyone pulled together and overcame those issues was a real positive, he said.

"Through the efforts of the chief officers of the department, the board of directors and the firefighting staff," he said, "we put all of our resources together with a positive attitude and made it work."

"And the support of the public was just as amazing," Seltzer said.

According to the press release, the Central Coventry Fire Department has a fleet of active apparatus including four engine/pumpers, one ladder truck, three rescue trucks, two squad trucks, one dive truck, one reserve engine/pumper, one reserve rescue truck, one support car, three administrative vehicles, one marine boat, three Zodiac-type rescue boats, one incident command trailer and one fire prevention trailer. This

gives the Central Coventry Fire District the largest number of emergency response resources of any fire district in Coventry, the release states, and the equipment is in better shape than when there were four separate districts. In addition, according to the release, the department has identified four pieces of apparatus to be sold this year.

The department has a long list of accomplishments for its first year, according to the press release. It received two grants, one of which was used to purchase two thermal imaging cameras, ensuring that every first on-scene apparatus has a camera. The second grant was surplus property in the form of an underwater camera system for the department's dive team.

In addition the department completed reorganization of duty assignments for officers, adopted a set of employee policies, redesigned run response

assignments for apparatus, completed renovation work at the fire stations, renegotiated contracts with various suppliers, instituted award programs and more.

In its first year, the department was able to operate under its nearly \$4 million budget by almost \$25,000, according to the release.

Looking toward the future of the department, Seltzer said the biggest thing he wants for the department right now is a strategic master plan, which the department will work on over the next year.

"I want to become a better organization. I'd like to see us get accredited at some point because there is a fire service accreditation and I guess I'm leaning toward making it a more quality performing organization," Seltzer said. "That's really my biggest goal. If I can accomplish that in the next few years, I think we'll be in good shape."



Submitted Photo

Dr. Franklin E. Mirrer (right), an orthopedic surgeon at Kent Hospital, says that a new knee surgery procedure that he is performing — which was developed as the result of the work that he has done with athletes throughout the state — is less invasive, resulting in less scarring and less pain.

# New knee surgery offers possibility of quicker recovery, less invasive

Continued from Page A-1

"What we do is reverse drill; we put the drill inside the knee, slipping it through a portal incision in the front of the knee that is about 9 to 10 millimeters in circumference," Mirrer said. "I use a thin metal wire as a guide through the skin to the knee."

Mirrer said the technicalities of the procedure are so complicated the average person might not be able to grasp them but the noteworthy differences between the old and the new way of performing the procedure are limited scarring, lessened initial recovery time and decreased level of pain.

"Considering the short term, there is going to be much less pain and the patient will recover much quicker in the first few months with the new way of doing the procedure; but, because of the rehab required with such a surgery, the long term repair of the knee is basically going to be about the same," Mirrer said. "In my opinion, I think the final end result will be much better even when you just consider the scarring, but, being so early on in the process, I cannot prove that yet."

Cuzytek is serving as Mirrer's first official full arthroscopic patient. He recently underwent the new procedure with Mirrer and, just weeks after the surgery, he said, he is able to move his knee with little or no pain.

"I am feeling pretty good now," he said. "My knee is still a little agitated but I am starting physical therapy on Thursday so it should hopefully start to improve."

Cuzytek said he personally didn't have much hesitation about being Mirrer's first full arthroscopic procedure patient and if anyone else had uncertainty about the newness of the procedure he would encourage them to go for it.

"My doctor told me that with the new procedure there would be less scarring and that there wouldn't be as much pain and he was definitely right," Cuzytek said. "You can barely see the cuts. I can't even really see them around my knee. There is one small one on the side, two underneath and one on top, but they are tiny."

**"I may be the only one doing this now but I think, in the next 10 years, this is going to be the standard of care for this type of injury."**

Dr. Franklin E. Mirrer  
Orthopedic surgeon

Cuzytek said he wound up in this situation following an accident on his four-wheeler. He said he turned the machine too quickly which forced his leg into the ground, twisting his knee sideways.

"I fell and, although my knee hurt, I thought nothing of it for a while," he said.

Over time the pain worsened, Cuzytek said, and while at work one afternoon several weeks ago, his knee just gave out. This incident propelled him to act, Cuzytek said, and he paid a visit to Kent where he met Mirrer and first learned of the new option available to him.

Mirrer said he had learned the new procedure as a result of work he does among athletes in the state.

In addition to being an orthopedic surgeon at Kent, Mirrer also serves as the head team physician for Providence College men's basketball team.

"I learned it at a teaching course for sports injuries," Mirrer said. "I briefly heard

it mentioned and I said 'wow, this sounds like a great technique' and if I had to have my knee done, this is how I would want to do it."

Mirrer said he spent the next three months mastering the new techniques. He attended courses, participated in practice surgeries and has been slowly implementing small parts of the new procedure into the old way of doing the surgery. It wasn't until Cuzytek, however, Mirrer said, that he finally decided to go for the whole thing.

To date Mirrer said he has completed three of these procedures and has another coming up on an athlete from CCRI.

"I may be the only one doing this now but I think, in the next 10 years, this is going to be the standard of care for this type of injury," Mirrer said.

In addition to the recognition Mirrer earned for the most recent work he has done with this procedure, he has also been commended as the first to use a number of surgical procedures at Kent. He was the first to perform an arthroscopic rotator cuff repair, an all arthroscopic reconstruction for shoulder instability and also for shoulder arthritis.

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